

ABSTRACT

An objective of the present invention is to provide polypeptides capable of retaining a strong enzyme activity of formate dehydrogenase in the presence of an organic solvent and to provide the uses thereof.

5 Formate dehydrogenase mutant polypeptides, which are resistant to organic solvents, were constructed by substituting cysteines at position 146 and/or at position 256 in the amino acid sequence of *Mycobacterium vaccae*-derived formate dehydrogenase by site-directed mutagenesis. The polypeptides have strong activities of formate dehydrogenase in the presence of an organic solvent. The mutants are useful for the production of alcohols using
10 ketones as raw material, etc.